AMENDMENTS TO THE CLAIMS

1-13.   (cancelled)

14.   (previously presented) A machine readable medium storing a data structure in which

concepts are represented comprising:

    a machine readable medium on which is stored a data structure including

        a plurality of fields, each of the fields filled with a readable value;

        a plurality of roots, each root including a fixed number of the plurality of fields,

each root including a most significant field filled with a readable value designating a

general abstract concept and a field of lesser significance filled with a readable value

designating a narrower concept within the general abstract concept designated within the

most significant field, whereby each root designates a concept indicated by the value of

each field included in the root; and

        a word including the plurality of roots, each concept designated by each root of

the plurality of roots designating a different characteristic of the word.

15.   (original) The method of claim 14 wherein the plurality of roots are selected from a

predetermined set of roots.

16.   (currently amended) The method of claim ~~14~~ 15 wherein the predetermined set of roots

is organized based upon a definitional tree-type structure with the readable value of the most

significant field designating a concept at a highest level of the tree-type structure and the

readable value of the field of lesser significance designating a concept at a lower level of the

tree-type structure.

17.   (previously presented) The method of claim 14 wherein the word includes a further root

designating how the word is used.

18-28. (cancelled)

29.   (previously presented) A method of representing data comprising:

representing each root of a set of roots with a value based on a definitional tree-type structure, each root including a plurality of common fields representing levels of the tree-type structure, each specific field included in a specific root having a value corresponding to the meaning of the specific root at a level of the tree-type structure represented by the specific field;

representing a data concept by grouping a plurality of roots selected from the set of roots to form a word, each root of the plurality of roots corresponding to a characteristic of the data concept represented by the word; and

storing the word.

30.   (previously presented) The method of claim 29 wherein each word includes a number of bits equal to a number of bits contained in a processor register of a computer for processing the word, each field of the plurality of common fields associated with at least one bit.

31.   (previously presented) The method of claim 29 wherein a value of a field at each level of the tree-type structure designates a meaning of each value of a higher level of the tree-type structure.

32.   (previously presented) The method of claim 29 wherein certain roots are conventionalized based on values assigned to more basic roots, conventionalized roots being assigned field values based on a predetermined convention.

33.   (previously presented) The method of claim 29 wherein a characteristic designated by certain roots is defined based on values assigned to more basic roots.

34.   (previously presented) The method of claim 29 wherein the word includes a negation bit

associated with a particular root, a value assigned to the negation bit designating that the

meaning of the particular root is opposite to the meaning assigned to that value in the tree-type

structure.

35.   (previously presented) The method of claim 29 wherein the word includes a connotative

root that indicates how the word is used.

36.   (previously presented) A method of representing concepts comprising the steps of:

representing each particular concept with a plurality of roots, each root of each plurality

of roots representing a characteristic of a particular concept;

representing each root with a plurality of fields, each field of each plurality of fields

designating meaning of the represented root at a level of significance in a definitional tree-type

structure, a top level of significance in the definitional tree-type structure dividing knowledge

into a plurality of abstract subsets of ideas, each lower level of significance in the definitional

tree-type structure dividing each higher subset of ideas into a plurality of subsets of ideas,

wherein a most significant field of each plurality of fields represents a subset of the plurality of

abstract subsets of the top level of the definitional tree, and a least significant field of each

plurality of fields represents a subset of ideas at a lowest level of the definitional tree-type

structure.

37.   (previously presented) The method of claim 36 wherein each field includes at least one

bit and each plurality of roots representing a particular concept is included in a word having a

number of bits equivalent to a number of bits contained in a processor register of a computer for

processing the word.

38.   (previously presented) The method of claim 36 wherein a certain root of the plurality of roots is conventionalized based on contents of the fields of at least one other root of the plurality of roots.

39.   (currently amended) The method of claim 36 wherein the characteristic represented by a certain root of the plurality of roots is defined based on contents of the ~~field~~ fields of at least one other root of the plurality of roots.

40.   (currently amended) The method of claim 36 further including the step of representing whether a meaning designated by a particular root is to be interpreted ~~in~~ negatively.

41.   (previously presented) The method of claim 36 wherein the step of representing each particular concept further includes representing each particular concept with a further root that represents a connotation of the particular concept represented.

42.   (previously presented) A method for storing data comprising:

forming a tree-type taxonomy for word roots, the upper level of the taxonomy divided into a plurality of classes, each class divided into a plurality of subclasses at a lower level of the taxonomy, each level of the taxonomy represented by a field in each word root;

combining a plurality of the word roots to form a word, each word root forming the word representing a characteristic of the word; and

storing the word.

43.   (previously presented) The method of claim 42 wherein taxonomy for word roots includes conventions whereby the class and subclasses represented by fields of a word root are altered based on the fields of other word roots combined with the word root to form the word.

44.   (previously presented) The method of claim 42 wherein the characteristic represented by

at least one root combined to form the word is designated by reference to another root combined

to form the word.

45.   (previously presented) The method of claim 42 wherein the step of combining includes

combining a series of negation bits with the word roots to form the word, the negation bits

indicating whether each root is interpreted in the negative.

46.   (previously presented) The method of claim 42 wherein the step of combining includes

combing a further root with the plurality of the word roots, the further root representing how the

word is used.